

ABSTRACT

A backlight device obtains white light by mixing and synthesizing the three primary colors, the white light appearing as bright to the human eye as conventional white light; in addition, the backlight device is highly economical, in that it reduces power consumption by reducing the effective power input to the light-emitting diodes, and lengthens the lives of the light-emitting diodes.

In a backlight device comprising self-luminous-sources in the colors of red, green, and blue, the device mixing and synthesizing the three primary colors from the self-luminous sources into white light, in order to light a liquid crystal display device using a light-conducting plate and/or a light-scattering plate, the self-luminous-sources of the three primary colors are illuminated sequentially at different timings for each color, so that the light-generating timings partially overlap, achieving time-division light-emission.